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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,527

07/24/2003

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EXAMINER

DESAI, ANISH P

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/625,527	YOSHIDA ET AL.	
	Examiner	Art Unit	
	ANISH DESAI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 02/25/08 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/25/08 has been entered.
2. Claims 1-8 and 10 are pending. Claims 9 and 11-19 are cancelled. Support for amended claim 1 is found in the specification.
3. The 35 USC Section 102(b) or 103(a) rejections based on Barrera (US 5,965,256) are withdrawn, because Barrera does not teach or suggest "wherein the first film is made of at least one resin selected from...polycarbonate resins". However, upon further consideration, a new 35 USC Section 103(a) rejection based on Barrera (US 5,965,256) in view of Ellison et al. (US 5,342,666) is made.
4. A new 35 USC Section 112-second paragraph rejection is made.

Claim Objections

5. Claim 1 is objected to because of the following informalities: claim 1 recites "polyvinylident chloride", it should read "polyvinylidene chloride". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 requires the first film made of at least one resin selected from the group consisting of "polyethylene terephthalate...polyvinylidene chloride...polyurethane resins...and polycarbonate resins", which can be interpreted as the first film can be comprised of polyvinylidene chloride and polyurethane. It is noted that polyvinylidene chloride is a vinyl polymer. Additionally, this claim requires the first film be different from the composite film, wherein the composite film is comprised of a urethane polymer and a vinyl polymer. Therefore, if the first film is comprised of polyvinylidene chloride polymer (vinyl polymer) and polyurethane then it is no longer different from the composite film. Accordingly, the claim raises the issue of indefiniteness.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as obvious over Barrera (US 5,965,256) in view of Ellison et al. (US 5,342,666).

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9. Regarding claims 1 and 3, Barrera discloses a multi-layered film disposed on a substrate. The multi-layered film of Barrera comprises interpenetrating polymer networks (IPN) layer, preferably acrylate-urethane IPN. The IPN layer of Barrera's invention is prepared by simultaneous thermal cure of a mixture of acrylate monomer(s) via free-radical polymerization and urethane precursors, namely polyisocyanate and polyfunctional alcohols, via condensation polymerization (column 8, lines 14-19 and column 12, lines 55-67). Further, Barrera teaches a method of forming the multi-layered film (protective film) wherein the method comprises steps of (a) coating or otherwise depositing a layer comprising IPN film precursors onto a cured adhesive film; (b) coating or otherwise depositing a fluoro-containing topcoat layer onto the curable IPN film precursor, wherein the fluoro-containing topcoat layer is selected from the group consisting of a cured fluoropolymer and energy curable fluoropolymer precursor; and (c) applying at least one heat and light energy to the construction to cure the curable IPN film precursors and the energy-curable fluoropolymer precursor (column 3, lines 60-67 and column 4, lines 1-3). Further the adhesive used in the invention of Barrera is a pressure-sensitive adhesive (PSA) (column 5, line 65). The urethane-acrylate IPN layer of Barrera is equated to a composite film comprised by a composition containing a urethane polymer and a vinyl polymer as effective components as claimed. Additionally, the fluoro-containing topcoat layer is equated to a first film. The structure of the multilayered film of Barrera is fluoro-containing topcoat layer/IPN layer/PSA layer, which reads on the claimed structure of first film/composite film/PSA layer as presently claimed.

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10. With regards to claim 1, the difference between the claimed invention and Barrera is that Barrera is silent as to teaching of "wherein the first film is made of at least one resin selected from the group consisting of polyethylene terephthalate...and polycarbonate resins.". However, Ellison discloses a molded articles having a molded polymer substrate and a decorative surfacing film adhered to one side of the substrate. The decorative film of Ellison is formed of weatherable polymer (abstract) wherein the decorative and weatherable film of Ellison has appearance that closely simulates the high grade automotive pain finishes used in automotive body parts (column 2 lines 27-36). Additionally, as weatherable polymers, Ellison discloses fluoro polymers, acrylate polymers, urethane polymers, and blends thereof (column 4 lines 32-35). Additionally, the polyurethane resins of Ellison provide coatings having high flexibility, resistance to gasoline, scratch resistance and weather resistance (column 5 lines 20-37).

11. It is noted that the first film of the primary reference of Barrera is formed of fluoro-containing polymers. Additionally, the protective films of Barrera can be used on vehicle surfaces such as aircraft, boats, trucks, and the like (column 15 lines 20-25). The weatherable polymer containing films of the secondary reference of Ellison is useful for providing protection to automobiles and the films of Ellison further provides decorative finish to the automotive parts. Thus, it would have been obvious to use weatherable polymer such as polyurethane in the first film (fluoro-containing film) of Barrera, motivated by the desire to provide a film having high flexibility, scratch resistance, resistance to gasoline, and decorative surface finish to the automotive surfaces.

12. Given that Barrera as modified by Ellison teaches what has been set forth above, it is the position of the Examiner that the properties of the PSA sheet having a modulus of 9 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 1), the PSA sheet has a modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 2), the composite film has a storage modulus of at 25°C of less than $2.0 \times 10^8 \text{ Pa}$ and a storage modulus at 100°C of $3.0 \times 10^5 \text{ Pa}$ or more (claim 6), wherein the first film has a storage modulus at 25°C of $2.0 \times 10^8 \text{ Pa}$ or more, would be present in the invention of Barrera as modified by Ellison. Support for the Examiner's position is based on the fact that the PSA sheets of both inventions i.e. that of Applicant, and Barrera as modified by Ellison comprise a first film having a material different from the composite film/composite film comprising a urethane polymer and a vinyl polymer/PSA layer. Further, the first film of Barrera as modified by Ellison contains polyurethane. The inventions of Barrera as modified by Ellison and that of Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is upon the Applicant to prove it otherwise (see *In re Fitzgerald* 205 USPQ 594).

13. With regards to claim 4, the recitation "composite film comprises a film obtained by reacting a polyol and a polyisocyanate...coating to cure it." is directed to product by process limitation. The products by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by

process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

14. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). In the instantly claimed invention the composite film of the Applicant contains a composition which comprises a urethane polymer and an acrylic polymer (vinyl polymer) that is irradiated by radiation. The invention of Barrera is previously noted. As previously noted, the IPN layer of Barrera is formed of acrylate-urethane IPN (column 1, lines 9-10). Additionally, Barrera discloses oven curing of urethane and acrylate polymer mixture to form IPN layer (column 12, lines 65-67). Therefore, the IPN layer of Barrera is similar to Applicant's claimed composite film.

15. With regards to claims 8 and 10, Barrera discloses the first film having a thickness 0.025 mm (column 20, line 66), which converts to 25 μm (1 mm = 1,000 μm). This disclosure of Barrera meets the claim limitation of the first film has a thickness (t_1) of 10 μm or more and 200 μm or less as claimed in claims 8 and 10. Additionally,

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Barrera discloses the composite film having a thickness of 0.1 mm (column 18, line 45), which converts to 100 μm . This disclosure of Barrera meets the claim limitation of the composite film has a thickness (t_2) of 10 μm or more and 300 μm or less as claimed in claims 8 and 10.

Response to Arguments

16. Applicant's arguments with respect to claims 1-8 and 10 have been fully considered but they are moot in view of the new ground of rejection.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukugo et al. (JP 15-171475 English translation provided) discloses composite film for holding semiconductor product, wherein the composite film is formed of urethane polymer and a vinyl group polymer (see claims).

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Vo can be reached on 571-272-1485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Hai Vo
Primary Examiner, Art Unit 1794